

AMENDMENT UNDER 37 C.F.R. §1.111

1-2. Cancelled

3. (amended) The portion method of claim 172, wherein said portion has two opposing surfaces and contains fibers that are substantially normal to said opposing surfaces.

4. (amended) The portion method of claim 172, wherein said portion has two opposing surfaces and contains fibers that are substantially parallel to said opposing surfaces.

5. (amended) The portion method of claim 172, further comprising:
applying at least one electrode to each opposing surface.

6. (amended) The portion method of claim 5, wherein a plurality of interdigitized electrodes are applied.

7. (amended) The fiber assembly method of claim 164, wherein laminating said planar layers comprises interleaving planar layers of varying fiber characteristics.

8. (amended) The fiber assembly method of claim 7, wherein said layers of varying fiber characteristics have different fiber concentrations.

9. (amended) The fiber assembly method of claim 7, wherein said layers of varying fiber characteristics have fibers of different average diameters.

10. (amended) The fiber assembly method of claim 7, wherein a different set of electrodes is applied to said layers of varying fiber characteristics.

11. (amended) The fiber assembly method of claim 164, wherein said layers have substantially similar fiber characteristics.

12. (amended) The fiber assembly method of claim 164, further comprising poling said sectioned portion.

13. (amended) The fiber assembly method of claim 164, wherein said piezoelectric material is at least one of PZT (lead zirconium titanate), lead niobate (PbNbO₆), lead titanate (PbTiO₃), barium titanate (BaTiO₃), sodium bismuth titanate (pure or co-doped), lead-based ceramics doped with lanthanum, tin, or niobium, electrostrictive materials, memory piezoelectric materials, or relaxor materials.

14. (amended) The fiber assembly method of claim 164, wherein each opposing side of said portion has an area greater than about 1.5cm².

15. (amended) The fiber assembly method of claim 164, wherein the variation of fiber concentration is no greater than about 20%/cm³.

16. (amended) A fiber assembly made from ~~the method of~~ manufacturing a fiber assembly, said method comprising:
providing a plurality of layers, each layer comprising sintered fibers of piezoelectric material aligned substantially parallel;
laminating said plurality of layers; and
applying a matrix material to the laminated layers to affix said layers and form a fiber assembly of claim 1.

17. (amended) A portion made from ~~the method of claim 2~~ a method of manufacturing a fiber assembly, said method comprising:
providing a plurality of layers, each layer comprising sintered fibers of piezoelectric material aligned substantially parallel;
laminating said plurality of layers;
applying a matrix material to the laminated layers to affix said layers and form a fiber assembly; and

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sectioning said portion from said fiber assembly.

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